

# A PALM NUT FROM THE MIOCENE OF THE CANAL ZONE.

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The fossil plants collected during the geological work by T. W. Vaughan and others in the Canal Zone have been described recently by M. A. Howe<sup>1</sup> and the writer.<sup>2</sup> Subsequently I have received from the United States National Museum several small and exceedingly fragmentary collections that contain nothing noteworthy except a new and fairly well characterized palm fruit. This comes from locality 5845, which is 1½ miles northeast of Gatun and overlooking the Gatun Locks, and seems worthy of special comment. The geological horizon is the Gatun formation, which comprises the latest pre-Pliocene sediments recognized in the Canal Zone, and in terms of the European section, as determined by Vaughan, is Burdigalian or Helvetian in age.<sup>3</sup>

It has been customary among paleobotanists to refer fossil palm fruits to the genus *Palmocarpus* Lesquereux unless they possessed very obvious relationships with existing genera as in the case of the Eocene forms referred to the genus *Nipadites*. In the case of the present form I am constrained to depart from this custom since the fossil greatly resembles the fruits of the tribe Iriarteae, and refer the new species to the genus *Iriartites*<sup>4</sup>, the type of which is *Iriartites tumbezensis* Berry,<sup>5</sup> a feather palm described recently from the Miocene of the north Peruvian coast.

## IRIARTITES VAUGHANI, new species.

Nut an unsymmetrical prolate spheroid in general form, rounded proximad and slightly narrowed distad, slightly over 4 cm. in length, 3.3 cm. in maximum width, and 2.8 cm. in maximum thickness. Hilum large, eccentric, about 5 mm. in diameter. Surface roughened by a covering of narrow flat elongated overlapping fibers exactly as

<sup>1</sup> Howe, M. A. On some fossil and recent Lithothamnieceae of the Panama Canal Zone. Bull. U. S. Nat. Mus. 103, pp. 1-13, pls. 1-11. 1919.

<sup>2</sup> Berry, E. W. The fossil higher plants from the Canal Zone. Idem. pp. 15-44, pls. 12-18.

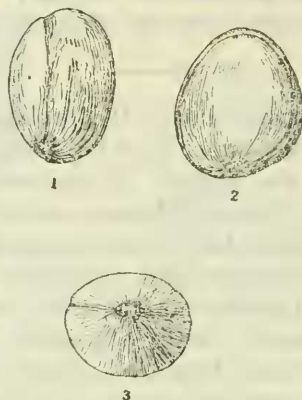
<sup>3</sup> See Vaughan, Idem. Table facing page 595.

<sup>4</sup> Berry, E. W. Proc. U. S. Nat. Mus., vol. 55, p. 285, 1919.

<sup>5</sup> Idem, pl. 14.

in the fruits of existing species of *Iriartea*, *Astrocaryum*, etc. Species named in honor of T. Wayland Vaughan as a slight tribute of appreciation of his work in the American tropics.

The present species was first compared with the nuts of *Astrocaryum* Meyer, a genus with numerous existing species ranging from Mexico to southern Brazil, but in this genus the nuts are more



FIGS. 1-3, *IRIARTITES VAUGHANI*  
BERRY. GATUN FORMATION,  $1\frac{1}{2}$   
MILES NORTHEAST OF GATUN,  
CANAL ZONE. 1, 2, LATERAL VIEWS;  
3, VIEW FROM BELOW, SHOWING  
LARGE HILUM.  $\frac{1}{2}$  NAT. SIZE.

symmetrical and the three perforations are usually obvious. The genus *Iriartea* of Ruiz and Pavon, whose fruits are very close to the fossil, contains over a dozen, perhaps more, not very well understood existing species, essentially South American but ranging from Costa Rica southeastward through Colombia and the basins of the Orinoco and Amazon and along the eastern lower slopes of the Andes to Bolivia.

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